

REMARKS**I. STATUS OF THE CLAIMS**

Claims 1 – 17 and 25 – 30 are currently pending. Claims 18 – 24 and 31 – 32 are cancelled. Although not conceding the merit of the Office’s pending rejections, Applicants have amended claim 1 to recite nonwoven webs of *laterally consolidated* nonelastic thermoplastic fibers in order to facilitate the prosecution of this application. Support for this amendment can be found, for example, at pages 6 and 11 of the original specification. No new matter has been added.

II. PRIOR ART REJECTIONS

The Office has rejected claims 1 – 6, 9 – 11, 13 – 17, and 25 – 30 as being anticipated by US 5,336,545 (Morman). In particular, the Office asserts that Morman teaches a laminate constructed of materials similar to those of the claimed invention (e.g., a polypropylene nonwoven fabric and a block-copolymer elastic sheet).

In addition, the Office has rejected claims 25 – 30 under 35 U.S.C. § 103(a) as being obvious over Morman in view of US Re 35,206 (Hassenboehler) and has further rejected claims 7, 8, and 12 under 35 U.S.C. § 103(a) as being obvious over Morman in view of US 5,789,065 (Haffner). With respect to combination of Morman and Hassenboehler, the Office asserts that it would have been obvious to transversely consolidate the web of Morman as taught by Hassenboehler. With respect to the combination of Morman and Haffner, the Office asserts that it would have been obvious

to use a metallocene-catalyzed ethylene film in the composite of Morman, since one skilled in the art would know to select a known material on the basis of its suitability for the intended use.

A. SUMMARY OF CLAIMED INVENTION:

The presently claimed invention is directed to a tear resistant laminate having an elastic polymeric film disposed between, and bonded to, two nonwoven webs of laterally consolidated, non-elastic thermoplastic fibers. Consolidation of a nonwoven web involves subjecting a thermoplastic nonwoven web to primary drawing under an elevated temperature. A laterally consolidated nonwoven web has improved physical properties, especially in the traverse direction (i.e., the cross machine direction) such as an increased elongation-at-break with a minimum reduction in the force-to-break strength (see e.g., Table II and Table III of the specification).

B. PRIOR ART REFERENCES:

1. US 5,336,545 (Morman)

Morman discloses a “necking” process in which a nonwoven fabric is narrowed in at least one dimension by applying a tensioning force to the fabric at room temperature. Morman further discloses a process whereby a necked material can be “reversibly necked”. That is, *after* a polypropylene fabric has been necked, it can be placed in an oven and heated to 120° C to form a reversibly necked material. According to Morman, “necking and heat treating the neckable spunbonded material decreases most tensile

properties but increases the cross-machine direction stretch.” (Morman, Col. 15, lines 58 – 61).

2. US Re 35,206 (Hassenboehler)

Hassenboehler teaches a consolidation process applied to a nonwoven fabric. In particular, the non-woven web is drawn while being subjected to high temperatures. According to Hassenboehler, the heat reorients the webbing’s fibers, thus allowing the webbing’s width to narrow as it is being drawn.

3. US 5,789,065 (Haffner)

Haffner teaches a process of first preparing laminate having an elastic layer and a non-woven layer, and then necking the laminate while applying heat to soften the elastic layer, thereby causing the elastic to loose its pre-necked memory.

C. ARGUMENTS

1. Morman does not teach all of the elements of claims 1 – 6, 9 – 11, 13 – 17, and 25 – 30.

Morman fails to teach a nonwoven web of laterally consolidated fibers. A claim is anticipated by a reference only if the reference teaches each and every element of the claim. MPEP 2131. As described in more detail below, Morman does not teach, or even suggest, a laterally consolidated web or its equivalent, and thus does not anticipate the relevant claims as currently amended.

Lateral consolidation of the claimed invention involves subjecting a nonwoven web precursor to heat wherein the fibers of the web are reoriented, thereby allowing the

web's width to narrow without breaking fibers as the material is drawn. In contrast, the necking or reversible necking processes of Morman involves using high tensioning forces at room temperature to stretch a nonwoven web to the point of tearing the fibers.

Despite the Office's arguments, these two processes produce two *different* materials which have different physical attributes. For example, as demonstrated in the attached Declaration of Stephen Bruce, laterally consolidated webbing has better bonding point integrity compared to necked webbing, which leads to comparatively better tensile strength of the stretched material. More specifically, the Declaration of Stephen Bruce describes microscopic images of thermal bonding points that were made in nonwoven webs of spun bound polypropylene. In a first image, a sample of un-stretched webbing is shown having symmetrical, diamond-shaped bonding points that appear in a regular, repeating pattern. In a second image, a sample of the webbing is shown which has been subjected to lateral consolidation. The original diamond-shaped bonding points of the second sample appear to remain largely intact after the laterally consolidation. In a third image, a sample of the webbing is shown which has been subjected to necking. The integrity of the original diamond-shaped bonding points appear damaged and, in certain places, completely destroyed. These unambiguous differences between laterally consolidated material and necked material demonstrate that the two materials are not only different, but that laterally consolidated materials possess superior physical attributes.

Applicants thus disagree with the Office's conclusion that necked nonwovens are similar to, and lack any substantial differences from, laterally consolidated nonwovens.

Applicants further disagree with the Office's assertion that the combination of the necking and bonding processes described in Morman is a consolidation process. The Office has stated that:

“...while the nonwoven fabric may not be set in a transversely consolidated state before being bonded to the elastic polymeric film, the nonwoven fabric is still transversely consolidated through necking. The nonwoven fabrics of Morman are set because it may be meltblown or spunbound Additionally, when the nonwoven fabrics of Morman are bonded to the film, heat is applied. The fibers would remain in a traversely consolidated state thereafter (i.e. the[y] would be set).” (See Office Action dated 11/21/05, page 4).

These arguments clearly contradict the actual teachings of Morman. That is, rather than considering the Morman reference *as a whole*, the Office merely points to individual characteristics of different processes to confirm its position, while ignoring significant portions which teaching otherwise. For example, although consolidation and bonding both involve the application of heat to the nonwoven material, the processes and results are completely different. Specifically, consolidation involves applying heat to a nonwoven fabric to restructure the fabric's fibers which, in turn, leads to a narrowing of the fabric's width. Thermal bonding, on the other hand, applies heat to a fabric/elastomer composite to partially melt the elastic layer, thereby binding together the elastic and fabric layers. Bonding is not intended to, nor does it accomplish, the type of fiber reorientation that occurs via consolidation. Thus, the Office's arguments fall short in that the simple application of heat to a fabric that is held under tension does not correlate to, or even resemble, a consolidation process.

As further evidence that heat bonding is not equivalent to consolidation, the Office's attention is directed to the temperature ranges required for each process. As

shown in Morman, heating bonding is performed at 127° F, whereas “heat setting” a roll of previously necked fabric is performed at 248° F (120° C). Also, according to Hassenboehler, consolidation preferably occurs at a temperature from 250° - 300° F. Thus, there is no equivalency between a consolidation process and a combined necking and bonding process.

In view of the fact that Morman does not teach or even suggest a tear-resistant laminate having a nonwoven web of *laterally consolidated* nonelastic thermoplastic fibers, the Office’s conclusion that the claimed invention is anticipated by Morman is untenable. Applicants therefore respectfully request that this rejection be withdrawn.

2. The proposed modification of Morman would change its principle of operation

With respect to claims 25 – 30, there is no motivation to modify the teachings of Morman to include the use of high-temperatures as proposed by the Office. To the contrary, such a modification would change the disclosure’s principle of operation. As per MPEP 2143.02, modifications of this nature demonstrate that the combined teachings are insufficient to render the claims *prima facie* obvious.

The Office asserts that it would have been obvious to transversely consolidate the web of Morman as taught by Hassenboehler. As described above, Hassenboehler teaches a consolidation process wherein a nonwoven fabric is subjected to high temperatures to reorient the fabric’s fibers, thus narrowing the fabric’s width. In contrast to Hassenboehler, Morman teaches a necking process wherein a nonwoven fabric is

subjected to high tension in order to narrow the fabric's width. The method taught by Morman is expressly conducted in the absence of heat (i.e., at room temperature). The Office's suggestion to modify Morman in view of Hassenboehler (i.e. applying heat instead of tension) would thus change the basic principle of operation of Morman. As such, the teachings are incompatible and cannot be combined to demonstrate obviousness. The Office's rejection of Morman in view of Hassenboehler is therefore respectfully traversed.

3. The combination of Morman and Haffner fails to teach all of the elements of claims 7, 8, and 12.

With respect to claims 7, 8 and 12, the combination of Morman and Haffner fails to disclose a nonwoven web of *laterally consolidated* nonelastic thermoplastic fibers. It is incontrovertible that, to establish a *prima facie* showing of obviousness, the cited reference or combination of references must include each and every aspect of the claimed invention. MPEP 2143. Here, contrary to the Office's conclusions, neither Morman nor Haffner teach, or even suggest, laterally consolidated fibers.

As demonstrated above, the Morman disclosure is limited to webbing that has been stretched by a cold necking process. There is no teaching or suggestion whatsoever in Morman of nonwoven webs of laterally consolidated fibers. Thus, Morman does not teach at least one element of the claimed invention.

This deficiency is not remedied by Haffner. As described above, Haffner teaches a process in which a laminate is formed and then necked while heat is applied to the elastic material so that the elastic is softened and loses its pre-necked memory. Since

neither Morman nor Haffner teaches or suggests an element of the claimed invention, they fail to support a *prima facie* case of obviousness, either individually or in combination. Thus, Applicants respectfully traverse the Office's rejection of the claims over Morman in view of Haffner.

IV. CONCLUSION

In view of the proposed claim amendments and the arguments presented above, the present application is believed to be in condition for allowance and an early notice thereof is solicited. The Office is invited to contact the undersigned counsel in order to further the prosecution of this application in any way.

Respectfully submitted,



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